

**REMARKS**

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 1-8 were pending prior to the Final Office Action. Claims 9-14 are added through this Reply. Therefore, claims 1-14 are pending. Claims 1 and 13 are independent.

**DRAWINGS ARE ACCEPTABLE**

In the previous Reply filed on May 11, 2005, Applicant submitted amendments to Figures 10A, 10B and 10C (second amended figures). The Examiner alleged that the amendments are not supported by the original specification. Applicant respectfully disagrees.

The second amended figures correct an error of the amended Figures submitted on October 19, 2004 (first amended figures). The first amended figures illustrate the glass substrate as being inclined down from right to left, but should actually illustrate the glass substrate 34 as being inclined down from left to right. The second amended figures correct these errors.

The second amended figures are consistent with the specification. In paragraph [0042] of the specification as originally submitted, it is stated "the glass substrate 34 is placed on the surface of the susceptor with an angle of 85

degree ... the glass substrate 34 is safely placed on the susceptor 30 inclined to one side."

The angle of inclination of the glass substrate 34 illustrated in the second amended figures is consistent with the angle of inclination of the robot arm as stated in paragraph [0020] and as illustrated in Figures 4C and 4D of the drawings as originally submitted. In paragraph [0020] of the specification as originally submitted, it is stated "the robot art 8 is inclined at around 85 degree and moves up for safely placing the glass substrate 4 on the surface of the susceptor 10. As illustrated in Figures 4C and 4D, the glass substrate 4 is inclined downwards from left to right, just as in the second amended figures. Clearly, the second amended figures are supported by the specification.

Applicant respectfully requests that the second amended figures be accepted.

#### § 102 REJECTION – TEPMAN

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Tepman et al. (US Patent 5,589,224). *See Final Office Action, item 3.* Applicant respectfully traverses.

While not conceding the appropriateness of the Examiner's rejections, but merely to advance prosecution of the instant application, independent

claim 1 has been amended to recite, in part “a robot arm for transferring the glass substrate onto the susceptor and returning the glass substrate from the susceptor, wherein the robot arm slides the glass substrate on the sliding portion of the susceptor” and “a groove formed in said portion of the susceptor for receiving material resulting from sliding of the glass substrate by the robot arm on the surface of the susceptor.” It is clear that the robot arm slides the glass substrate on the sliding portion of the susceptor.

As demonstrated in the previous Reply filed on May 11, 2005, Tepman cannot teach or suggest sliding the glass substrate by any means. Tepman describes the operation of the robot blade 34 (allegedly equivalent to the robot arm as recited) to position the substrate 14 onto the substrate support member 16 (allegedly equivalent to the susceptor as recited). Tepman discloses that the substrate 14 is positioned on the robot blade 34 and inserted into the chamber. The substrate 14 is initially positioned over the retracted support member 16 and the pin array 30. The pins 30 are raised to lift the substrate 14 off the robot blade 34. The robot blade 34 is then withdrawn and then the pins 30 are lowered to deposit the substrate 14 on to the spacer support pins 36 of the support member 16. *See Tepman, column 5, lines 20-40; Figure 5.*

To remove the substrate 14 from the chamber, pins 30 elevate the substrate 14 and then the robot blade 34 is inserted to lift the substrate 14

from the support member 16 and then the robot blade 34 is withdrawn with the substrate 14. *See Tepman, column 5, lines 20-40; Figure 5.*

Tepman clearly discloses that the substrate 14 is never slid by the robot blade 34 on the support member 16. For at least this reason, independent claim 1 is distinguishable over Tepman.

It should be noted that the “slide error” as discussed in paragraph [0024] of the specification does NOT refer to an error caused by arm bending of the substrate. *See Final Office Action, Response to Arguments section.* Paragraph [0024] simply describes that an object of the present invention is to minimize the breakage of the glass caused by the “slide miss” of the glass of the conventional art.

In the conventional art as described in the present specification, the glass substrate 4 is slid by the robot arm 8 to safely place the glass substrate 4 on the surface of the susceptor 10. *See originally submitted specification, paragraph [0017].* When this occurs, the film-forming material 11 collects at the slide part of the susceptor 10. *See originally submitted specification, paragraph [0020].* This is illustrated in Figures 4C and 4D of the drawings as originally submitted. As illustrated, the film-forming material 11 can catch the glass substrate 4 as it is slid into the slide part 41 of the susceptor 10. If this happens, the glass substrate 4 can break. *See originally submitted specification,*

*paragraph [0022].* The “slide miss” referred to in paragraph [0024] is the breakage of the substrate 14 that can occur as described above.

For at least the reasons discussed above, independent claim 1 is distinguishable over Tepman. Claims 2 and 3 depend from independent claim 1 directly or indirectly. Thus, for at least the reasons stated with respect to claim 1 as well as on their own merits, claims 2 and 3 are also distinguishable over Tepman.

Applicant respectfully requests that the rejection of claims 1-3 based on Tepman be withdrawn.

#### § 102 REJECTION – DUBOIS

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by DuBois et al. (US Patent 5,855,687). *See Final Office Action, item 4.* Applicant respectfully traverses.

Independent claim 1 recites, in part “a robot arm for transferring the glass substrate onto the susceptor and returning the glass substrate from the susceptor, wherein the robot arm slides the glass substrate on the sliding portion of the susceptor” and “a groove formed in said portion of the susceptor for receiving material resulting from sliding of the glass substrate by the robot arm on the surface of the susceptor.”

Similar to Tepman, DuBois also cannot teach or suggest these features. Dubois merely indicates that to commence wafer processing, the susceptor 26 is moved downward. The wafer 28 is then inserted into the processing chamber and onto the susceptor 28 by a robot arm and lift pins, which are not even illustrated. DuBois is entirely silent regarding sliding the wafer 28 by the unillustrated robot arm. Clearly, independent claim 1 is distinguishable over DuBois.

Claims 2 and 3 depend from independent claim 1 directly or indirectly. Thus, for at least the reasons stated with respect to claim 1 as well as on their own merits, claims 2 and 3 are also distinguishable over DuBois.

Applicant respectfully requests that the rejection of claims 1-3 based on DuBois be withdrawn.

§ 103 REJECTION – TEPMAN, NAKATA

Claim 4 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tepman in view of Nakata (US Patent 5,119,761). *See Final Office Action, item 6.* Applicant respectfully traverses.

Claim 4 depends from independent claim 1 and it is demonstrated above that claim 1 is distinguishable over Tepman. Nakata is not relied upon to correct for at least the above-noted deficiencies of Tepman. Thus, claim 1 is

distinguishable over the combination of Tepman and Nakata. Due to the dependency thereon as well as on its own merits, claim 4 is also distinguishable over the combination of Tepman and Nakata.

Applicant respectfully requests that the rejection of claim 4 based on Tepman and Nakata be withdrawn.

§ 103 REJECTION – TEPMAN

Claims 5-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tepman. *See Final Office Action, item 7.* Applicant respectfully traverses.

Claims 5-8 depend from independent claim 1 and it is demonstrated above that claim 1 is distinguishable over Tepman. Due to the dependency thereon as well as on their own merits, claims 5-8 are also distinguishable over Tepman.

Applicant respectfully requests that the rejection of claims 5-8 based on Tepman be withdrawn.

NEW CLAIMS

Claims 9-13 are added through this reply. All new claims are believed to be distinguishable over the cited references, individually or in any combination.

Claims 9-13 depend from independent claim 1 directly or indirectly.

Independent claim 13 recites, in part “sliding the glass substrate onto the susceptor such that any film forming material collects in the groove of the sliding portion of the susceptor.”

Claim 14 depends from independent claim 13.

Applicant respectfully requests that the new claims be allowed.

## **CONCLUSION**

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants hereby petition for an extension of one (1) month to December 3, 2005 in which to file a reply to the Office Action. The required fee of \$120.00 is enclosed herewith.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit

U.S. Application No. 10/029,035  
Docket No. 2658-0280P  
December 5, 2005  
Art Unit: 1763  
Page 14 of 14

Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16  
or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By:

Esther H. Chong  
Esther H. Chong  
Reg. No.: 40,953  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
Telephone: (703) 205-8000

HHS  
EHC/HNS/bsh